Title (en)

METHOD AND SYSTEM FOR DISEASE DETECTION USING MARKER COMBINATIONS

Title (de)

VERFAHREN UND SYSTEM ZUR ERKENNUNG VON ERKRANKUNGEN MITTELS MARKERKOMBINATIONEN

Title (fr)

METHODE ET SYSTEME DE DETECTION DE MALADIES AU MOYEN DE COMBINAISONS DE MARQUEURS

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Abstract (en)

[origin: WO2004058055A2] The present invention relates to methods and system for the diagnosis diseases or conditions. In a particular aspect, a disclosed method for determining a panel includes calculating a panel response for each patient in a set of diseased patients and in a set of non-diseased patients. The panel response is a function of the value of each of a plurality of markers in a panel of markers. The method also includes calculating a value for an objective function. The objective function is indicative of the effectiveness of the panel. The steps of calculating a panel response for each patient and calculating a value for an objective function are iterated by varying at least one of the parameters relating to the panel response function and a sense of each marker to facilitate optimization of the objective function. The objective function may be a measure of an overlap of panel responses of diseased patients and panel responses of non-diseased patients. The contribution of each marker to the objective function may be determined, and the panel size may be reduced by removing the poorest markers. Thus, an optimum panel of markers and an optimal panel response function for the diagnosis of a disease or condition may be determined.

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